

embodiments, with various modifications, as are suited to the particular use contemplated. It is intended that the scope of the invention be defined by the Claims appended hereto and their equivalents.

WHAT IS CLAIMED IS:

1. A secure system for stationary electronic voting comprising
an intelligent voting machine
one or more trusted servers with associated storage devices
means for secure wired or wireless communication between the intelligent voting machine and the trusted servers/storage
means for locating the intelligent voting machines in the polling booths at the polling stations
means for connecting one or more intelligent voting machines to the local trusted server
means for connecting the trusted local server/storage to other trusted servers located away from the polling station by secure communication links.
2. An intelligent voting machine comprising
a touch screen enabled input/output and display
means for a built in processor
means for internal hard disk storage
means for removable memory storage
means for activation of the voting machine by card activation method and or
means for activation of the voting machine by other methods
a built-in or external secure printer
means for secure communication between the intelligent voting machine and the secure printer
means for initiating and terminating the print action

means for obtaining a secure print out of the ballot cast by the voter
means for the secure print out being an true representation of the ballot cast by the voter
means for time stamping of the print out and or identification of the voter by voter
registration number or other methods

700 means for the secure printer to provide an alert on failure by the voter to take the print out
means for the secure destruction of the print out of the previous voter, in the event the print
out is not taken;
means for shielding the print out of one voter from being seen or taken by the next voter
means for a secure wired or wireless connection between the intelligent voting machine and
705 one or more trusted servers including a local, central and or network servers
means for leveraging the processing power of the intelligent voting machine by itself and
or in conjunction with the processing power of the trusted servers.

3. A secure system for electronic voting comprising

710 a mobile communication device
one or more trusted servers with associated storage devices
means for dynamically configuring the mobile device as a mobile voting machine
means for secure wired or wireless communication between the mobile voting machine
and the trusted servers/storage
715 means for dynamic reconfiguration of the mobile device in a stand alone manner and or in
conjunction with the trusted servers
means for enabling the mobile voting machine features and functionality by leveraging the
processing power of the mobile device by itself and or in conjunction with the processing
power and databases of the trusted local, central and or network servers.

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4. A mobile voting machine/mobile device comprising
a touch screen for input/output and display,
a keyboard,

a speaker and microphone
725 processing/storage capability resident within the mobile device
means for communication by wired or wireless methods of voice and data
means for emulating the functions/features of the mobile voting machine by internal
reconfiguration and or;
means for reconfiguration of the mobile device as a mobile voting machine in conjunction
730 with the trusted local, central and or network server.

5. A secure system for mobile electronic voting of claim 3 comprising
means for the mobile device to be uniquely identified by one or more methods such as by
IPv6 identification number, EIN number, telephone number and other methods; and or
735 means for the utilization of legally approved voter profile for authentication purposes,
means for authentication of the voter by comparison of the data in the databases/lookup
tables resident one or more trusted servers and or comparison in conjunction with the data
bases/lookup tables resident on the mobile device/mobile voting machine itself;
means for online registration with a trusted election server of the mobile device/mobile
740 voting machine by device identification method and or
means for online registration of the individual as a voter/voter profile
means for the voter profile to indicate party affiliation and or independent status
means for the eligibility to be determined by the registrar of voters
means for a unique electronic key to be assigned by the trusted election server to the
745 mobile voting machine and or the eligible voter
means for the electronic key to be valid for a designated time period
means for the electronic key to be activated at the precise local date and time of the
precinct/election zone at the start of the absentee voting period and
means for the electronic voting key to be deactivated at the precise date and local time of
750 the precinct/election zone at the conclusion of the absentee voting period and or

means for the activation of the electronic voting key at the precise time and date of the precinct/election zone when the polls officially open

means for the expiration of the electronic key at the precise date and local time of the precinct/election zone when the polls close.

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6. A secure system for mobile electronic voting of claim 5 comprising
means for location determination of the mobile device/mobile voting machine by trusted
GPS server means

means of wired or wireless communication with the GPS server and trusted servers;

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means for the precise determination of the physical location of the voter/mobile
device/mobile voting machine

means for determination of the eligibility based on presumed location of the voter in
conjunction with the designated/approved mobile device/mobile voting machine;

means for enabling/disabling the mobile electronic voting privileges;

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or including the

means for enabling/disabling of the mobile device/mobile voting machine based on
presumed physical location and the relationship of the presumed physical location to the
designated voting precinct location.

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7. A secure system for mobile electronic voting of claim 5 comprising
means for the time determination of the mobile device/mobile voting machine by trusted
time keeping server means
means of wired or wireless communication with the trusted time keeping server and other
trusted servers;

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means for the precise determination of the physical location and time of the voter/mobile
device/mobile voting machine

means for determination of the eligibility of the voter in conjunction with the designated/approved mobile device/mobile voting machine based on presumed location and time,

780 means for enabling/disabling the mobile electronic key and the voting privileges by time based factors;
including the

means for enabling/disabling of the mobile device/mobile voting machine based on the time at presumed physical location and the relationship of the time at presumed physical
785 location to the time at the designated voting precinct location.

8. A secure system for mobile electronic voting of claim 5 comprising
means for precinct level time stamping the mobile electronic voting by the voter
means for time stamping based on physical location time of the voter/mobile
790 device/mobile voting machine.

9. A secure system for mobile electronic voting of claim 5 comprising
means for precinct level location stamping of the mobile electronic voting by the a
trusted server and or
795 means for location stamping based on physical location time of the voter/mobile
device/mobile voting machine by a trusted server and or
means for voter identity stamping by a trusted server.

10. A secure system for mobile electronic voting of claim 5 comprising
800 means for precinct level location stamping of the mobile electronic voting by the a
trusted server and or
means for location stamping based on physical location time of the voter/mobile
device/mobile voting machine by a trusted server and or
means for voter identity stamping by a trusted server

805 means for acquiring the ballot data displayed on the touch screen of the mobile device/mobile voting machine frame by frame or all of the frames for print out and storage purposes;

means for the real time provision of an electronic validated receipt by the trusted election server,

810 means for enabling a print out and or storage of the actual ballot cast by the voter in conjunction with the trusted official election server and the processing/storage capabilities of the mobile device/mobile voting machine.

11. A secure system for mobile electronic voting of claim 5 comprising

815 means for high speed wired or wireless communication between the mobile voting machine and one or more of the trusted servers,

means for encrypted and secure communication of voting actions and voting data.

820 12. A secure electronic voting system comprising

a separate and distinct sub system consisting of intelligent voting machines located at the polling stations

825 means for high speed wired or wireless communication between the intelligent voting machine and one or more trusted local, central and or network servers,

means for using the processing power/databases of the intelligent voting machine by itself and or in conjunction with the processing power/databases of the trusted local, central and or network servers;

830 a separate and distinct sub system consisting of mobile device/mobile voting machines for voting from any location

means for high speed wired or wireless communication between the mobile device/mobile voting machine and one or more trusted local, central and or network servers,

835 means for using the processing power/databases of the mobile device/mobile voting machine by itself and or in conjunction with the processing power/databases of the trusted local, central and or network servers;

840 means for use by the authorized election body of the two separate and distinct sub systems, namely the intelligent voting machines system and or the mobile voting machine system in a standalone manner and or in combination while maintaining the confidentiality of the ballot by dynamically decoupling voter ID relationship to the ballot cast upon initiation of the selections process and cast ballot function

845 means for the delivery of uniform, timely, secure and convenient voting services to the voters in accordance with the local, state and federal laws governing each elections.

13. A secure electronic voting system of claim 12 comprising

850 means for eliminating the disparities inherent in the prior art methods relative to information, time and machine technology differences
means for leveling the playing field among the absentee ballot voters, the voters that use the polling stations and the mobile device/mobile voting machine enabled voters.

855 14. A secure system for electronic voting of claim 12 comprising
means for authentication of the voter by the intelligent voting machine or the mobile device/mobile voting machine

860 means for executing one or more authentication tasks in a stand alone manner by utilizing
the processing power/databases of the intelligent voting machine/mobile voting
machine and or in conjunction with the processing power/databases of one or more
of the trusted local, central and or network servers;

865 means for using one or more levels of authentication of the voter as appropriate for the
intelligent voting machine or the mobile device/mobile voting machine

870 means for authentication by photographic method, drivers license, passport, birth certificate,
social security number, identity card number, video, audio, voice print, finger print,
digital signature, hand writing recognition, signature recognition, voting machine
ID number and other methods;

875 means for using one or more identification methods for determining voter and or voting
machine identity singly and or in selected combination as appropriate for each sub
system, in conformance with the election laws.

15. A secure system for electronic voting of claim 12 comprising

880 means for enabling real time access to approved and trusted information before and
or during the activity of casting the ballot by means of the intelligent voting
machine or the mobile device/mobile voting machine,

means for providing the authorized real time information to the voting machine by secure
wired or wireless communication with a trusted local, central and or network server;

885 means for the appropriate information to be displayed or presented on the desired device
using the desired interface at the desired time

means for the voter to view the information in one or more windows for comparison and decision analysis on candidates and the issues

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means for the information to include candidate profiles, photos, video, audio, and positions on the issues and other information

means for the selection of the desired input/output and display method on the intelligent voting machine or the mobile device/ mobile voting machine

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means for the information request/delivery, the ballot selections, actuations, and casting of the ballot by full function keyboard, partial function keyboard, special function keyboard, macro functions, touch screen, voice, audio, sound, text, image, photo, symbol driven, object driven, icon driven, Braille and other methods;

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means for configuring the intelligent voting machine or the mobile device/mobile voting machine interface, input, output and display functions in a standalone manner by using the processing power/databases of the voting machine by itself and or in conjunction with the trusted local, central and or network servers

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means for informed real time decision, selection and casting of the ballot by the voter at the desired time and using the desired voting machine.

910 16. A secure system for electronic voting of claim 15 comprising

means for disabled voters to select the desired input/output/display interface that is of assistance to overcome the disability

915 means for the disabled voter to be adequately informed
means for the disabled voter to cast the ballot in the desired manner and at the desired time
means for the disabled voter to receive a receipt and true confirming information about the
ballot as cast in the manner that is most useful to the disabled or non disabled
920 voter.

17. A secure system for electronic voting of claim 15 and 16 comprising

means for real time text to speech and speech to text conversion
925 means for voice input and output in one or more languages
means for language translation of the text and speech from and to one or more
languages;
means for the appropriate text to speech, speech to text and language
930 translations/conversions by using the processing power/databases of the intelligent
voting machine or the mobile voting machine by itself and or in conjunction with
the processing power/databases resident on the trusted local, central and or network
servers.
935 means for ballot selection and casting of the ballot in one or more languages.

18. A secure system for electronic voting of claim 12 and 15 comprising

means for a trusted second individual to assist the first individual who is an eligible voter
940 means for validating the eligibility of the first individual and provisionally enabling the
first individual

945 means for the acquisition of the identity and signature of the second individual in a touch
screen window or by other input and authentication means in conjunction with the
selected voting machine and or the trusted local, central and or network server

means for the authentication and approval of the second individual to act in a fiduciary
capacity with specific power of attorney privileges for the first individual voter
950 means for the second individual to determine the ballot choices of the first individual by the
appropriate methods

means for the second individual to cast the ballot as a proxy for the first individual;
and or

955 means for a third individual and or additional witnesses to be authenticated and approved by
trusted servers to act as a witness

means for witnessing and authenticating by one or more witnesses to ensure that the second
individual is performing the actions intended by the first individual voter.

960 19. A secure system for electronic voting of claim 18 comprising

means for the second individual to remotely perform the actions desired by the first
individual using a stationary or mobile device

means for the first individual to remotely monitor and review by appropriate and desired
interface, input and output method, the actions of the second individual;

965 means for the first individual and the third individual acting as a witness, to remotely
monitor and review by appropriate choice of the desired interface, input and output
means the real time actions of the second individual;

means for wired or wireless connectivity and collaboration between the first individual,
second individual, third individual and other individuals, the stationary devices in

970 use, the intelligent voting machines in use, the mobile device/mobile voting
machine in use and the trusted servers
means for remote, contemporaneous, at a designated time or delayed collaboration by
leveraging the processing power of the communication devices, voting machines
and the servers acting alone and or in conjunction.

975 20. A secure system for electronic voting of claim 12 and 15 comprising
means for tracking the actions of the specific voter and the voting machines used by the
voter in real time
means for detecting the actions of multiple voting by the same individual on behalf of the
980 voter and or on behalf of other voters
means for locking out a particular voter or the particular intelligent voting machine or the
mobile device/mobile voting machine from accessing the trusted election servers
means for fraud detection, determining fraud trends, isolating fraud prone machines,
fraud prone precincts and providing alerts in real time for action by law
985 enforcement authorities
means for providing a trail of the fraudulent activity for review and correction of any
voting discrepancies by election body and judicial officials.

21. A secure system for electronic voting of claim 12 comprising
990 means for providing one or more layers of security for conducting elections in a fair and
transparent manner
means for locking in the desired functionality and locking out the undesired functionality of
the trusted election servers by a function-lock and time-lock feature
means for automatically initiating the function-lock and time-lock features at the desired
995 time on one or more of the selected secure and trusted servers and terminating the
function-lock or time-lock automatically after a set time period duration or at a set
time

means for limiting the access, alteration of the functions and other features during the function-lock and time-lock sequence

1000 means for override of the function-lock and the time-lock features by authorized override procedure obtained by judicial orders or other official directives

means for the prevention of premature release of the polling data and the coordinated release of certified results at the desired locations, at the desired time and in the desired sequence.

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22. A secure system for electronic voting of claim 12 comprising

means for validating and certifying the election results by an escrow server and by the designated chief election official such as the secretary of state

means for providing accurate, timely and final certified results to the public soon after the

1010 polls close by leveraging the computational capabilities of one or more trusted servers acting in a standalone manner and or in conjunction with each other.

23. A secure system for electronic voting of claim 12 comprising

means for configuring a hierarchy of trusted election servers with one or more servers

1015 connected by a secure communication path and one or more servers connected by a plurality of secure communication paths;

means for locating the trusted election servers in one or more geographically separated locations

means for the trusted servers to be under the supervision of election authorities, bi-partisan

1020 commissions, neutral bodies and other un-impeachable organizations

means for achieving redundancy in real time storage of the election data at each level such as the intelligent voting machines, the mobile voting machines, the precinct level servers by enabling dynamic sweep of the data from each voting machine and the servers for remote and secure storage

- 1025 means for defining the sweep nodes, the sweep periodicity from each node and the sweep duration
- means for randomly transferring the data on randomly selected redundant communication lines to limit intrusion and achieve a high level of data integrity and security.
- 1030 24. A secure system for electronic voting of claim 12 comprising
- means for dynamically configuring the features of the intelligent voting machine for new functions and new elections by software communication and download/upload of the functional instructions and content from a trusted local server, central server, and or a network server
- 1035 means for dynamically configuring the features of the mobile voting machine for new functions and new elections by software communication and download/upload of the functional instructions and content from a trusted local server, central server, and or a network server
- means for the mobile communication device/mobile voting machine to be dynamically
- 1040 configured with the approved functional instructions at the designated time and for the designated elections using the processing power of the mobile device by itself and or in conjunction with a local, central and or network server.
25. A secure system for electronic voting of claim 12 comprising
- 1045 means for the mobile electorate such as disabled individuals, students, business travelers, military personnel and others to participate in elections with ease
- means for enabling a single mobile device for communication, computation, control, command and for electronic voting functions.
- 1050 26. A secure system for electronic voting of claim 12 and 25 comprising
- means for electronic voting in corporate governance matters and share holder matters

means for conducting the voting in conjunction with trusted servers maintained by third parties

1055 27. A secure system for electronic voting of claim 12 and 25 comprising
means for using the mobile device for auction and other transactions
means for the auction to be conducted without fraud and in a fair and equitable manner in
conjunction with a trusted third party server
means for authentication of the parties to the auction by a trusted third party server
1060 means for execution and compliance to the terms by the parties to the transaction by
escrow server means.

28. A secure system for electronic voting of claim 12 and 25 comprising
means for using the mobile device for opinion surveys
1065 means for the opinion survey to be conducted without fraud and in a fair and equitable
manner in conjunction with a trusted third party server
means for authentication of the parties to the opinion survey by a trusted third party server
means for computation and analysis of the results by escrow server means

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